REMARKS

Claims 1-17, 19 and 21 are currently pending.

Interview Summary

On 5 November 2008, applicant's undersigned representative conducted a personal interview with Examiner Michele Kidwell at the USPTO. The following is a complete and proper recordation of the substance of the interview: (A) No exhibits were shown and no demonstrations were conducted; (B) Claims 1-17, 19 and 21 were discussed; (C) Hanson (USPN 5,509,915) was discussed; (D) no proposed amendments were discussed; (E) the general thrust of the principal arguments of the applicant and the Examiner are those presented below; (F) no other pertinent matters were discussed; (G) the general results or outcome of the interview was that applicant would file the present response; and (H) the interview was not via electronic mail.

35 USC § 103 - Hanson

Claims 1-17, 19 and 21 stand rejected under 35 USC § 103(a) as being unpatentable over Hanson (USPN 5,509,915). Applicants respectfully traverse this rejection.

Claim 1 recites, *inter alia*, a cover layer with a pore volume distribution curve with a maximum at a pore radius (abbreviated herein as "PVD Curve max") greater than or equal to 50 µm and with a wetting angle at the surface of at least 120º. Claim 1 further recites a liquid transfer layer with a PVD Curve max of from 105 to 325 µm.

As discussed in the Interview, the claims recite a pore volume ***distribution curve***, and it is this ***curve*** that has a maximum at a pore radius greater than or equal to 50 µm (cover layer) or from 105 to 325 µm (transfer layer). Thus, with regard to the transfer layer, it is not that the maximum pore size (radius) is 105 to 325 µm, but that the pore volume ***distribution curve*** has a maximum - a peak on the curve - from 105 to 325 µm.

In the Interview Summary, the Examiner recognized that "Mr. Boone provided clarification of the claim limitations regarding the pore volume distribution curve and the Examiner agreed that the initial interpretation of the Hanson reference regarding this limitations is incorrect."

Applicants respectfully assert that Hanson does not teach or suggest the presently claimed invention.

Transfer Layer

The Examiner asserts that it would have been obvious to modify the PVD Curve max of the Transfer Layer of Hanson to arrive at the presently claimed invention. Applicants respectfully disagree.

The presently claimed Transfer Layer has a PVD Curve max of 105 to 325 μm. The Examiner asserts that Hansen teaches a liquid transfer layer (allegedly layer 71) including a pore radius greater than 50 micrometers. The Examiner relies on column 17, lines 8-11, of Hanson. However, this section of Hanson recites that "***no more than about 5 percent of the maximum pores ... are greater than about 50 micrometers in diameter.***" If no more than 5% are greater than 50 μm in diameter, then 95% would be less than 50 μm in diameter. That would mean that 95% are less than 25 μm in radius (the claims use radius). And, if 95% are less than 25 μm, then the PVD ***Curve*** max is necessarily below 25 μm.

Thus, Hanson discloses a PVD Curve max of below 25 μm. The presently claimed invention has a PVD Curve max of 105 to 325 μm. A PVD Curve max of less than 25 μm is not a valid starting point for arriving at a PVD Curve max of 105 to 325 μm - at least not by routine optimization. Applicants respectfully assert that a PVD Curve max of 105 to 325 μm is ***not*** a routine discovery of an optimum or workable range based on the starting point of less than 25 μm.

As noted above, the Examiner agreed with this line of reasoning in the Examiner Interview. The Examiner is respectfully requested to contact applicants' undersigned representative should further discussion be necessary.

Unexpected Results

Moreover, the presently claimed invention provides unexpectedly improved results over the Hanson article.

The following results were presented in the response filed on 17 September 2008. The results further indicate the non-obviousness of the claimed liquid transfer layer with a PVD Curve max of from 105 to 325 μm.

Tests have been conducted to show the effects of using a Transfer Layer (TL) according to Hanson compared to using a TL according to an embodiment of the presently claimed invention. A Cover Layer with a PVD Curve max of 65 µm and a wetting angle of 123º was used with (1) A TL with a PVD Curve max of 147 µm; and with (2) a TL with a PVD Curve max of 20 µm. The combination of the CL with each TL was tested for (A) Liquid-Admission Speed, (B) Amount of Liquid Residuals and (C) Dryness. *Declaration of Barbro Moberg Alehammar, paragraph 7*.

The tests are significant because they are exemplary of competing factors in an absorbent article. It can be essential that an article is capable of receiving and rapidly admitting liquid. It is also important for the surface of the article to be kept as dry as possible, even after wetting, and for liquid which has passed into the article to remain there and not leak back out towards the skin of a user. These factors are typically competing, such that the prior art does not have an article where each of these factors have been satisfactorily balanced.

The test results show that the presently claimed invention provides an unexpectedly improved performance in all three (A, B, C) tests. It is also important to note that these results are performed with a uniform Cover Layer in order to isolate the effects of the Transfer Layer:

	(1) Embodiment of the present invention	(2)
Liquid-Admission Speed (seconds)	1.5 s	48 s
Amount of Liquid Residuals (g/m^2)	~0 g/m^2	~57 g/m^2
Dryness (to the touch)	Dry to touch	Wet to touch

See *Declaration of Barbro Moberg Alehammar, paragraph 11*.

Accordingly, the presently claimed invention provides a Transfer Layer that provides unexpected results compared to the alleged Transfer Layer of Hanson. The presently claimed Transfer Layer has an incredibly faster Liquid Admission speed, and is also capable of doing so while providing a Cover Layer that does not have any residual liquid and is dry to the touch. The presently claimed Cover Layer is clearly superior to that of the asserted art.

Accordingly, Hanson does not teach or suggest a transfer layer with a PVD Curve max of 105 to 325 µm. Accordingly, Hanson does not teach or suggest the presently claimed invention.

Cover Layer

The Examiner asserts that it would have been obvious to modify the wetting angle of the alleged Cover Layer of Hanson to arrive at the presently claimed invention. Applicants respectfully disagree.

Hanson discloses a wetting angle of less than 90º. The presently claimed cover layer has a wetting angle of at least 120º.

Unexpected Results - Criticality of the Claimed Range

The presently claimed invention provides unexpectedly improved results compared to those of Hanson.

Applicants understand the Examiner's position to be that while Hanson discloses a preference for a wetting angle of less than 90º, Hanson provides generic guidance that the wetting angle can be varied. While applicants traverse this position, such a position does not preclude the patentability of the presently claimed invention.

As noted in the MPEP at § 2144.05(III):

> Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the ***criticality of the claimed range***.

The following results were presented in the response filed on 17 September 2008. The results further indicate the non-obviousness of the claimed cover layer has a wetting angle of at least 120º. The results show the ***criticality*** of having a wetting angle of at least 120º.

Tests have been conducted to show the effects of using a Cover Layer according to Hanson compared to using a Cover Layer according to an embodiment of the presently claimed invention. Four different Cover Layers ("CL") were prepared/tested:

(1) A CL according to an embodiment of the invention with a
PVD Curve max at 65 µm and a wetting angle of 123º;

(2) A CL with a
PVD Curve max at 65 µm and a wetting angle of 0º;

(3) A CL with a

PVD Curve max at 35 µm and a wetting angle of 125º;

(4) A CL with a

PVD Curve max at 35 µm and a wetting angle of 0º.

Declaration of Barbro Moberg Alehammar, paragraph 3.

Each CL was combined with a transfer layer ("TL") with a PVD Curve max of 147 µm. Each combination was tested for (A) Liquid-Admission Speed, (B) Amount of Liquid Residuals and (C) Dryness. *Declaration of Barbro Moberg Alehammar, paragraph 7.*

The tests are significant because they are exemplary of competing factors in an absorbent article. It is essential that an article is capable of receiving and rapidly admitting liquid. It is also important for the surface of the article to be kept as dry as possible, even after wetting, and for liquid which has passed into the article to remain there and not leak back out towards the skin of a user. These factors are typically competing, such that the prior art does not disclose an article where each of these factors have been satisfactorily balanced.

The test results show that the embodiment of the presently claimed invention provides an unexpectedly improved performance in all three (A, B, C) tests - thus, showing the ***criticality*** of the claimed range. It is also important to note that these results are performed with a uniform Transfer Layer in order to isolate the effects of the Cover Layer:

	(1) Embodiment of the present invention	(2)	(3)	(4)
Liquid-Admission Speed (seconds)	1.5 s	1.8 s	2.3 s	2.3 s
Amount of Liquid Residuals (g/m^2)	~0 g/m^2	~12 g/m^2	~14 g/m^2	~25 g/m^2
Dryness (to the touch)	Dry to touch	Wet to touch	Wet to touch	Wet to touch

See *Declaration of Barbro Moberg Alehammar, paragraph 11.*

Accordingly, the presently claimed invention provides a Cover Layer that provides unexpected results compared to any alleged Cover Layer of Hanson. The presently claimed Cover Layer has the fastest Liquid Admission speed, yet is also

capable of doing so while providing a Cover Layer that does not have any residual liquid and is dry to the touch. The presently claimed Cover Layer is clearly superior to that of the asserted art.

Accordingly, Hanson does not teach or suggest a cover layer with a PVD Curve max greater than or equal to 50 µm and a wetting angle of at least 120º. Accordingly, Hanson does not teach or suggest the presently claimed invention.

<90º versus >120º

Hanson discloses a wetting angle of less than 90º. The presently claimed Cover Layer has a wetting angle of at least 120º.

Wetting angle measures the interaction of a liquid and a material surface. A wetting angle of less than 90º means a surface is wettable. A wetting angle of great than 90º means a surface is nonwettable. 90º is a threshold point - in that a change from below 90º to above 90º is a significant change. *Declaration of Barbro Moberg Alehammar, paragraph 6*.

Accordingly, a shift from less than 90º to at least 120º clearly has significant impact on the functionality of the surface. Because of the significance of the change, such a change is not simply the routine discovery of an optimum or workable range, as asserted by the Examiner.

To provide an example, please consider a reaction that uses liquid water as a medium. In a first example, the prior art teaches a water medium temperature of 40ºC. An inventor discovers that 70ºC provides better results. Thus, the temperature of the water medium is changed from 40ºC to 70ºC, for a change of 30ºC. This change of 30ºC may simply be the discovery of an optimum or workable range.

However, consider a second example where the prior art teaches a water medium temperature of 80ºC. An inventor discovers that 110ºC provides better results. Thus, the temperature of the water medium is changed from 80ºC to 110ºC, for a change of 30ºC. However, the "water" is now in the form of steam.

In both the first and second examples, there was a temperature change of 30ºC. In the second example, however, the 30ºC change also crossed a threshold point (100ºC - the boiling point of water) making the change in 30ºC much more significant. The change of 30ºC in the second example is a significant change - the medium went from liquid water to steam. Thus, because of the significance of this change, the

discovery of the new temperature cannot be asserted to be routine experimentation to one skilled in the art. Clearly, not all changes in a range are simply the ***routine*** discovery of an optimum or workable range.

Applicants respectfully assert that the presently claimed invention is not simply the routine discovery of an optimum or workable range. The change is from a wetting angle of below 90º to greater than 120º - this change crosses the threshold point of 90º. Accordingly, a proper *prima facie* case of obvious has not been presented, and cannot be presented with the art of record.

Hanson Teaches Away

Further, in contrast to the Examiner's position that it would have been obvious to modify the wetting angle of Hanson to arrive at the presently claimed invention, Hanson actually ***teaches away*** from the presently claimed invention. Hanson discloses that *wetting angles of less than 90°* are desired in at least selected areas of the surge management portion, and provides material examples to reduce the wetting angle below 90°. (Col. 26, lines 9-16; wettable fibers have wetting angles less than 90º - see Col 12, lines 45-50). Hanson also provides material examples to *reduce* the wetting angle *below 90°*. (Col. 26, lines 17-26).

In contrast, the wetting angle in the present claims is at least 120°. Accordingly, it is respectfully submitted that Hanson clearly *teaches away* from the covering layer having a wetting angle of at least 120° as recited in claim 1. Noting that it is the Examiner's position that it would be obvious to one of ordinary skill in the art to modify the wetting angle, Applicants direct the Examiner's attention to MPEP § 2143.01, wherein it is provided that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. (See, In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

§ 103 - Hanson Conclusion

In sum, the presently claimed invention is patentable over Hanson. Applicants respectfully assert that the presently claimed invention is not simply the routine discovery of an optimum or workable range - with regard to both the cover layer and the transfer layer. Further, Hanson teaches away from having a cover layer with a wetting

angle of at least 120º. Moreover, the presently claimed invention provides unexpectedly improved results over the Hanson article - with regard to both the cover layer and the transfer layer.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that the claims of the present application are now in condition for allowance, and an early indication of the same is earnestly solicited.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference would be helpful in resolving any remaining issues pertaining to this application; the Examiner is kindly invited to call the undersigned counsel for Applicants regarding the same.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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By: T.D. Boone

Travis D. Boone
Registration No. 52635